

**Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382**

Draft

**AIR QUALITY PERMIT
Issued under 401 KAR 52:020**

Permittee Name: The Somerset Refinery, Inc.
Mailing Address: 600 Monticello Street, Somerset, Kentucky 42501

Source Name: Same as above
Mailing Address: Same as above

Source Location: 501 Refinery Road, Somerset, Kentucky 42501

Permit Number: V-05-057
Source A. I. #: 3842
Activity #: APE20040003
Review Type: Title V
Source ID #: 21-199-00010

Regional Office: London Regional Office
875 S. Main Street
London, KY 40741
(606) 878-0157

County: Pulaski

Application
Complete Date: February 25, 1999
Issuance Date: xxxx x, 2006
Revision Date:
Expiration Date: xxxx x, 2011

**John S. Lyons, Director
Division for Air Quality**

TABLE OF CONTENTS

SECTION	ISSUANCE	PAGE
A. PERMIT AUTHORIZATION	Initial	1
B. EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS	Initial	2
C. INSIGNIFICANT ACTIVITIES	Initial	47
D. SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS	Initial	48
E. SOURCE CONTROL EQUIPMENT REQUIREMENTS	Initial	50
F. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS	Initial	51
G. GENERAL PROVISIONS	Initial	54
H. ALTERNATE OPERATING SCENARIOS	Initial	59
I. COMPLIANCE SCHEDULE	Initial	59

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

INDIRECT HEAT EXCHANGERS

Emission Point	Description	Capacity	Construction Commenced
01 (01-0)	400 HP Continental Boiler equipped with low-NOx burners, combusting refinery fuel gas or natural gas	13.4 mmBtu/hr	1997
02 (04-1)	Crude Distillation Heater equipped with low-NOx burners, combusting refinery fuel gas or natural gas	13.7 mmBtu/hr	1974
04 (02-6)	One (1) flare used to dispose of excess gas generated during normal operations, startups, shutdown and emergencies	20.25 mmBtu/hr	1987
21 (04-2)	Crude Distillation Heater equipped with low-NOx burners, combusting refinery fuel gas or natural gas	10.0 mmBtu/hr	1980
22 (02-4)	Gasoline Hydrotreater Heater equipped with low-NOx burners, combusting refinery fuel gas or natural gas	6.0 mmBtu/hr	1987
23 (02-1)	Catalytic Reforming Heater equipped with low-NOx burners, combusting refinery fuel gas or natural gas	5.0 mmBtu/hr	1975
24 (02-2)	Catalytic Reforming Heater equipped with low-NOx burners, combusting refinery fuel gas or natural gas	3.0 mmBtu/hr	1975
25 (02-3)	Catalytic Reforming Heater equipped with low-NOx burners, combusting refinery fuel gas or natural gas	1.3 mmBtu/hr	1975
26 (02-5)	Kerosene Hydrotreater Heater, equipped with low-NOx burners, combusting refinery fuel gas or natural gas	2.0 mmBtu/hr	1983
35 (-)	Crude Oil Distillation Column producing naphtha, kerosene, diesel, heavy gas oil and no. 6 oil, with emissions hard piped to EP02 and EP21	5,500 barrels per day	1940
36 (-)	Naphtha Hydrotreater producing low sulfur naphtha with emission hard piped to EP 22	1,540 barrels per day	1956
37 (-)	Naphtha Reformer producing gasoline blending stock and gasoline with emissions hard piped to EP 23, 24 and 25	1,540 barrels per day	1956
56 (-)	Vacuum Tower equipped with a furnace combusting refinery fuel gas or natural gas	2.6 mmBtu/hr	2006
57 (-)	Modified Hydrotreater Catalyst Unit equipped with a furnace combusting refinery fuel gas or natural gas	5.0 mmBtu/hr	2006
S187 (F187a, F187b)	Two (2) indirect heaters for storage tank 187, combusting refinery fuel gas or natural gas	1.5 mmBtu/hr each	2005

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**APPLICABLE REGULATIONS:**

- 401 KAR 60:005, Sections 2 and 3(1)(n) - incorporates by reference *40 CFR Part 60.100 to 60.109 (Subpart J) "Standards of Performance for Petroleum Refineries"* - applies to each unit combusting refinery fuel gas and commenced construction or modification after June 11, 1973.
- 401 KAR 60:005, Sections 2 and 3(1)(e) - incorporates by reference *40 CFR Part 60.40c to 60.48c (Subpart Dc), "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units"*, - applies to 400 HP Continental Boiler (EP01) which commenced after June 9, 1989 and has heat input rating of greater than 10 mmBtu/hr.
- 401 KAR 59:015, *New Indirect Heat Exchangers* - applies to the particulate matter and sulfur dioxide emissions for each indirect heat exchanger commenced on or after April 9, 1972
- 401 KAR 61:015, *Existing Indirect Heat Exchangers* - applies to the particulate matter and sulfur dioxide emissions for each indirect heat exchanger commenced before April 9, 1972.

1. Operating Limitations:

None

2. Emission Limitations:**Particulate**

- a) Pursuant to 401 KAR 61:015, the particulate emission rate from the Crude Distillation Heater (EP02), Gasoline Hydrotreater Heater (EP22), Catalytic Reforming Heater (EP23), Catalytic Reforming Heater (EP24), Catalytic Reforming Heater (EP25) each shall not exceed 0.614 lb/mmBtu.
- b) Pursuant to 401 KAR 59:015, the particulate emission rate from the 400 HP Continental Boiler (EP01) shall not exceed 0.3318 lb/mmBtu.
- c) Pursuant to 401 KAR 59:015, Section 4(1)(c), the particulate emission rate from the Kerosene Hydrotreater Heater (EP26), Vacuum Tower (EP56), Modified Hydrotreater Catalyst Unit (EP57), and two (2) indirect heaters for storage tank 187 (EP S187) shall not exceed 0.56 lb/mmBtu.

Sulfur Dioxide

- d) Pursuant to 401 KAR 61:015, the sulfur dioxide emission rate from the Crude Distillation Heater (EP02), Gasoline Hydrotreater Heater (EP22), Catalytic Reforming Heater (EP23), Catalytic Reforming Heater (EP24), Catalytic Reforming Heater (EP25) each shall not exceed 3.476 lb/mmBtu.
- e) Pursuant to 401 KAR 59:015, Section 5(1)(a), the sulfur dioxide emission rate from the Kerosene Hydrotreater Heater (EP26), Vacuum Tower (EP56), Modified Hydrotreater Catalyst Unit (EP57), and two (2) indirect heaters for storage tank 187 (EP S187) shall not exceed 3.0 lb/mmBtu.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)Opacity

- f) Pursuant to 401 KAR 61:015, the opacity from the Crude Distillation Heater (EP02), Gasoline Hydrotreater Heater (EP22), Catalytic Reforming Heater (EP23), Catalytic Reforming Heater (EP24), Catalytic Reforming Heater (EP25) shall not exceed forty (40) percent.
- g) Pursuant to 401 KAR 59:015, the opacity from the 400 HP Continental Boiler (EP01) shall not exceed twenty (20) percent.
- h) Pursuant to 401 KAR 59:015, Section 4(2), the opacity from the Kerosene Hydrotreater Heater (EP26), Vacuum Tower (EP56), Modified Hydrotreater Catalyst Unit (EP57), and two (2) indirect heaters for storage tank 187 (EP S187) shall not exceed twenty (20) percent based on a six (6) minute average, except that a maximum of forty (40) percent opacity based on a six (6) minute average shall be permissible for not more than six consecutive minutes in any sixty (60) consecutive minutes during cleaning the fire-box or blowing soot.

Hydrogen Sulfide

- i) Pursuant to 40 CFR 60.104(a)(1), each combustion unit including the Crude Distillation Heater (EP02), Crude Distillation Heater (EP21), Gasoline Hydrotreater Heater (EP22), Catalytic Reforming Heater (EP23), Catalytic Reforming Heater (EP24), Catalytic Reforming Heater (EP25), and Kerosene Hydrotreater Heater (EP26) shall be fired with fuel gas from reforming of hydrotreated naphtha, or with natural gas, and shall not burn any fuel gas that contains hydrogen sulfide (H₂S) in excess of 230 mg/dscm (0.10gr/dscf).
- j) Pursuant to 40 CFR 60.104(a)(1), the 400 HP Continental Boiler (EP01) shall be fired with fuel gas from reforming of hydrotreated naphtha, or with natural gas, and shall not burn any fuel gas that contains hydrogen sulfide (H₂S) in excess of 230 mg/dscm (0.10gr/dscf).
- k) Pursuant to 40 CFR 60.104(a)(1), each combustion unit including the Vacuum Tower (EP56), Modified Hydrotreater Catalyst Unit (EP57) and two (2) Indirect Heaters for storage tank 187 (EP S187) shall be fired with fuel gas from reforming of hydrotreated naphtha, or with natural gas, and shall not burn any fuel gas that contains hydrogen sulfide (H₂S) in excess of 230 mg/dscm (0.10gr/dscf).

VOC and HAP

- l) See **Section D.3, Source Emission Limitations** for hazardous air pollutant (HAP) and volatile organic compound (VOC) emission limitations.

Compliance Demonstration Method:

- a) Compliance with the particulate emission limit for each combustion unit is demonstrated when burning refinery fuel gas or natural gas, based on an AP-42 emission factor of 7.6 lbs total particulates per million standard cubic feet

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(mmscf) of gas burned. Also see **Specific Monitoring Requirements 4.a** and **Specific Record Keeping Requirements 5.a.**

- b) Compliance with the sulfur dioxide emission limit for each combustion unit is demonstrated when burning refinery fuel gas or natural gas, based on an AP-42 emission factor of 0.0006 lbs SO₂ per million standard cubic feet (mmscf) of gas burned. Also see **Specific Monitoring Requirements 4.a** and **Specific Recordkeeping Requirements 5.a.**
- c) Compliance with the opacity limit is demonstrated when burning refinery fuel gas or natural gas.
- d) Compliance with the hydrogen sulfide (H₂S) limit is demonstrated by monitoring the refinery fuel gas pursuant to **Specific Monitoring Requirements 4.b, and related Specific Recordkeeping Requirements 5** and **Specific Reporting Requirements 6.**
- e) See **Section D.3, Source Emission Limitations, *Compliance Demonstration Method*** to demonstrate compliance with HAP and VOC emission limits.

3. Testing Requirements:

- a) Pursuant to 401 KAR 59:015 Section 8(1)(f), the opacity shall be determined annually by EPA Reference Method 9.
- b) Additional testing shall be conducted at such times as may be required by the Cabinet in accordance with 401 KAR 52:020, Section 10 and 401 KAR 50:045.

4. Specific Monitoring Requirements:

- a) The permittee shall monitor and maintain records of the following information for each combustion unit:
 - i) The monthly refinery gas and natural gas usage (cubic feet/month).
 - ii) The monthly hours of operation.
 - iii) The results of the monthly ASTM analysis of refinery fuel gas heat content.
- b) Pursuant to 40 CFR 60.105(a), a continuous monitoring system shall be installed, calibrated, maintained, and operated by the permittee subject to the following provisions.
 - i) The instrument shall continuously monitor and record the concentration (dry basis) of H₂S in fuel gases before being burned in any fuel gas combustion device. [40 CFR 60.105(a)(4)]
 - A) The span value for this instrument is 425 mg/dscm H₂S.
 - B) Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location, if monitoring at this

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

location accurately represents the concentration of H₂S in the fuel gas being burned.

- C) The performance evaluations for this H₂S monitor under 40CFR 60.13(c) shall use Performance Specification 7. Method 11, 15, 15A, or 16 shall be used for conducting the relative accuracy evaluations.

- ii) For the purpose of reports under 40CFR 60.7(c), periods of excess emissions that shall be determined and reported are defined as follows: [40 CFR 60.105(e)]

NOTE: All averages, except for opacity, shall be determined as the arithmetic average of the applicable 1-hour averages, e.g., the rolling 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages.

All rolling 3-hour periods during which the average concentration of H₂S as measured by the H₂S continuous monitoring system under 40 CFR 60.105(a)(4) exceeds 230 mg/dscm (0.10 gr/dscf).

5. Specific Recordkeeping Requirements:

- a) The permittee shall maintain records of monthly emission unit fuel usage, hours of operation, and the ASTM analysis of fuel gas heat content.
- b) Pursuant to 40 CFR 60.7(b), the permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operations of the affected facilities and any periods during which a continuous monitoring system is inoperative.
- c) Pursuant to 40 CFR 60.7(f), the permittee shall maintain a file of the following:
- i) Continuous monitoring system data (e.g., H₂S measurements from combustion devices);
 - ii) Continuous monitoring system performance evaluations;
 - iii) Continuous monitoring system calibration checks; and
 - iv) Adjustments and maintenance performed on these systems.
- d) Pursuant to 40 CFR 60.107 and 40 CFR 60.7(c), the permittee shall maintain copies of reports required by **Specific Reporting Requirements 6.**
- e) Pursuant to 40 CFR 60.48c, the permittee shall record and maintain records for a period of two years of the amounts of each fuel combusted in the 400 HP Continental Boiler (EP01) during each month.
- f) See **Section F.2** for further requirements.

6. Specific Reporting Requirements:

- a) Pursuant to 40 CFR 60.105(e) and 40 CFR 60.7(c), the permittee shall submit reports for periods of excess emissions. Periods of excess emissions are defined in **Specific Monitoring Requirements 4.b.ii.**

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- b) Pursuant to 40 CFR 60.107(e), the permittee shall submit the reports required by 40 CFR 60, Subpart J to the Division semiannually for each six month period. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period.
- c) Pursuant to 40 CFR 60.107(f), the permittee shall submit a signed statement certifying the accuracy and completeness of the information contained in the submitted reports.
- d) See **Section F.9** for further requirements

7. **Specific Control Equipment Operating Conditions:**
None

8. **Alternate Operating Scenarios:**
None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Flare

Emission Point	Description	Capacity	Construction Commenced
04 (02-6)	One (1) flare used to dispose of excess refinery gas generated during normal operations, startups, shutdown and emergencies	20.25 mmBtu/hr	1987

APPLICABLE REGULATIONS:

401 KAR 63:015 *Flares*

NON-APPLICABLE REGULATIONS:

401 KAR 60:005, Sections 2 and 3(1)(n) - incorporates by reference *40 CFR Part 60.100 to 60.109 (Subpart J), "Standards of Performance for Petroleum Refineries"* – does not apply to flare pursuant to 40 CFR 60.104(a)(1)

1. Operating Limitations:

None

2. Emission Limitations:

- a) Pursuant to 401 KAR 63:015, Section 3, the visible emissions from the flare shall not exceed twenty (20) percent opacity for more than three (3) minutes in any one (1) day.
- b) See **Section D.3, Source Emission Limitations** for hazardous air pollutant (HAP) and volatile organic compound (VOC) emission limitations.

Compliance Demonstration Method:

- a) See **Specific Testing Requirements 3.** and **Specific Monitoring Requirements 4.** below to demonstrate compliance with the opacity limitation.
- b) See **Section D.3, Source Emission Limitations, *Compliance Demonstration Method*** to demonstrate compliance with HAP and VOC emission limits.

3. Testing Requirements:

- a) The permittee shall use EPA Reference Method 22 to determine opacity for the Flare to demonstrate compliance with **Emission Limitations 2.** The testing shall be performed annually and the Division reserves the right to require additional testing. [401 KAR 52:020, Section 10 and 401 KAR 50:045]
- b) The permittee shall use methods referenced in 40 CFR 60.18 or methods approved by the Division, to determine the maximum velocity (dscf/s) and the maximum net heating value of the gas being combusted in the flare (Btu/dscf). The testing shall be performed annually and started within 180 days of issuance of the final permit.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

- a) The permittee shall install and maintain a thermocouple or any other equivalent device to monitor the presence of a pilot flame in the flare. [401 KAR 52:020, Section 10]
- b) The permittee shall perform a visual inspection of the Flare in operation at least once per month to insure the equipment appears to be operating properly and that the integrity of the system is not compromised by damage, malfunction or deterioration. Immediate repairs shall be made to correct obvious failures or deficiencies. [401 KAR 52:020, Section 10]

5. Specific Recordkeeping Requirements:

- a) The permittee shall keep records required by Specific Monitoring Requirements 4.a and 4.b. and supply such to the Division upon request
- b) The permittee shall keep records and supply such to the Division upon request of all equipment inspections and any maintenance, inspection, calibration and/or replacement of such equipment required by Specific Monitoring Requirements 4.
- c) See **Section F.2.**

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Facility Storage Tanks I

Emission Point (Tank ID #)	Emission Unit Description	Product Stored (vapor pressure)	Installation Date	Storage Capacity (Gallons)
08 (190)	Internal Floating Roof Tank with primary seal (Vapor-mounted) and secondary seal (Rim-mounted)	Crude oil RVP 5 (2.69 psia)	1975	1,066,741
09 (186)	Internal Floating Roof Tank with primary seal (Vapor-mounted) and secondary seal (Rim-mounted)	Heavy gas oil (<0.1 psia)	1973	303,549
13 (195)	Vertical Fixed Dome Roof Tank	Kerosene (<1.0 psia)	1975	290,536.01
16 (183)	Vertical Fixed Dome Roof Tank	Heavy gas oil (<0.1 psia)	1975	289,820.40
16 (188)	Vertical Fixed Dome Roof Tank	#6 Oil (<0.1 psia)	1975	441,220
16 (189)	Vertical Fixed Dome Roof Tank	#6 Oil (<0.1 psia)	1975	1,115,079

APPLICABLE REGULATIONS:

401 KAR 60:005, Sections 2 and 3(1)(o) incorporates by reference *40 CFR Part 60.110 to 60.113(Subpart K)*, “Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978” - each storage vessel listed in this section is an affected facility, but only Tank 190 has applicable requirements.

401 KAR 59:050, *New Storage Vessels for Petroleum Liquid*

1. Operating Limitations:

- a) The permittee shall comply with the facility petroleum liquid throughput limits of **Source Emission Limitations D.3.** [State-only requirement in Permit No. O-84-124, General Condition 6]

Compliance Determination Method:

See **Source Emission Limitations D.3, Compliance Demonstration Method.**

For Storage Tanks 186 and 190

- b) The permittee shall equip storage tank 190 with a floating roof, a vapor recovery system, or their equivalents. [40 CFR 60.112(a)(1)]
- c) Storage tanks 186 and 190 shall be equipped with a permanent submerged fill pipe. [401 KAR 59:050, Section 3(2)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- d) Storage tanks 186 and 190 shall be equipped with one (1) of the following: [401 KAR 59:050, Section 3(3)]
 - i) An external floating roof, consisting of a pontoon-type or double-deck-type cover that rests on the surface of the liquid contents and is equipped with a closure device between the tank wall and the roof edge. Except as provided in paragraph C) below, the closure device is to consist of two (2) seals, one (1) above the other. The lower seal is referred to as the primary seal and the upper seal is referred to as the secondary seal. Each seal is to meet the following requirements:
 - A) The primary seal is to be either a metallic shoe seal, a liquid-mounted seal, or a vapor-mounted seal.
 - B) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in 401 KAR 59:050, Section 4(3)(c).
 - C) The owner or operator is exempted from the requirements for secondary seals and the secondary seal gap criteria when performing gap measurements or inspections of the primary seal.
 - ii) A fixed roof with an internal floating type cover equipped with a continuous closure device between the tank wall and the cover edge.
 - iii) A vapor recovery system which collects all VOC vapors and gases discharged from the storage vessel, and a vapor return or disposal system which is designed to process such VOC vapors and gases so as to reduce their emission to the atmosphere by at least ninety-five (95) percent by weight.
 - iv) A system equivalent to those described in paragraphs (i) to (iii) above as determined by the cabinet.
- e) There shall be no visible holes, tears, or other opening in the seal, any seal fabric, shoe, or seal envelope. [401 KAR 59:050, Section 4(1)]
- f) All openings, except stub drains, automatic bleeder vents, rim space vents, and leg sleeves, shall be equipped with covers, lids, or seals such that: [401 KAR 59:050, Section 4(2)(a)-(c)]
 - i) The cover, lid, or seal is in the closed position at all times (i.e., no visible gap) except when in actual use or as described in 401 KAR 59:050, Section 4(3)(f);
 - ii) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports; and
 - iii) Rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Compliance Demonstration Method:**

See the **Specific Monitoring, Recordkeeping and Reporting Requirements** below.

2. Emission Limitations:

See **Section D.3, Source Emission Limitations** for hazardous air pollutant (HAP) and volatile organic compound (VOC) emission limitations.

Compliance Demonstration Method:

See **Section D.3, Source Emission Limitations, *Compliance Demonstration Method*.**

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

See **Specific Recordkeeping Requirements 5.b through 5.d** below.

5. Specific Recordkeeping Requirements:

- a) The permittee shall maintain records of facility petroleum liquid throughput in accordance with **Section D.4** and **Section F.2**.

For Storage Tanks 186 and 190

- b) The permittee shall maintain a record of the petroleum liquid stored, the period of storage, and the maximum true vapor pressure of that liquid during the respective storage period. [401 KAR 59:050, Section 5(1) and 40 CFR 60.113(a)]
- c) Available data on the typical Reid vapor pressure and the maximum expected storage temperatures of the stored product may be used to determine the maximum true vapor pressure. [401 KAR 59:050, Section 5(2) and 40 CFR 60.113(b)]
- d) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than thirteen and eight-tenths (13.8) kPa (two and zero-tenths (2.0) psia) or whose physical properties preclude determination by the recommended method is to be determined from available data and recorded if the estimated true vapor pressure is greater than six and nine-tenths (6.9) kPa (one and zero-tenths (1.0) psia). [401 KAR 59:050, Section 5(3) and 40 CFR 60.113(c)]

For Storage Tanks 183, 188, 189, and 195

- e) For each tank the permittee shall maintain a record of the liquid stored, the period of storage, and the maximum true vapor pressure of that liquid during the respective storage period. Such records shall be provided to the Division upon request. [401 KAR 52:020, Section 10]

6. Specific Reporting Requirements:

See **Section F.9**.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Facility Storage Tanks II

Emission Point (Tank ID #)	Emission Unit Description	Product Stored (vapor pressure)	Installation Date	Storage Capacity (Gallons)
13 (184)	Internal Floating Roof Tank with primary seal (Vapor-mounted) and secondary seal (Rim-mounted)	Heavy gas oil (<0.1 psia)	1975	292,151
16 (187)	Internal Floating Roof Tank with primary seal (Vapor-mounted) and secondary seal (Rim-mounted)	Heavy gas oil (<0.1 psia)	1975	420,604.61
30 (197)	Internal Floating Roof Tank with primary seal (Vapor-mounted) and secondary seal (Rim-mounted)	Heavy gas oil (<0.1 psia)	1975	215,964
31 (196)	Internal Floating Roof Tank with primary seal (Vapor-mounted) and secondary seal (Rim-mounted)	Crude oil RVP 5 (2.69 psia)	1975	426,232

APPLICABLE REGULATIONS:

401 KAR 60:005, Sections 2 and 3(1)(q) - incorporates by reference *40 CFR Part 60.110b to 60.117b (Subpart Kb)*, "Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984".

401 KAR 59:050, *New Storage Vessels for Petroleum Liquids*.

1. Operating Limitations:

- a) The permittee shall comply with the facility petroleum liquid throughput limits of **Source Emission Limitations D.3.** [State-only requirement in Permit No. O-84-124, General Condition 6]

Compliance Determination Method:

See **Source Emission Limitations D.3, Compliance Demonstration Method.**

- b) The permittee shall equip storage tanks 184, 187, 196 and 197 with a fixed roof in combination with an internal floating roof meeting the following specifications: [40 CFR 60.112b]
 - i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.
- ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:
 - A) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.
 - B) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.
 - C) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.
 - iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.
 - iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.
 - v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.
 - vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.
 - vii) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.
 - viii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.
- c) Storage tank 196 shall be equipped with a permanent submerged fill pipe. [401 KAR 59:050, Section 3(2)]
- d) Storage tank 196 shall be equipped with one (1) of the following: [401 KAR 59:050, Section 3(3)]
 - i) An external floating roof, consisting of a pontoon-type or double-deck-type cover that rests on the surface of the liquid contents and is equipped with a closure device between the tank wall and the roof edge. Except as provided in paragraph C) below, the closure device is to consist of two (2) seals, one (1) above the other. The lower seal is referred to as the primary seal and the upper seal is referred to as the secondary seal. Each seal is to meet the following requirements:
 - A) The primary seal is to be either a metallic shoe seal, a liquid-mounted seal, or a vapor-mounted seal.
 - B) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in 401 KAR 59:050, Section 4(3)(c).
 - C) The owner or operator is exempted from the requirements for secondary seals and the secondary seal gap criteria when performing gap measurements or inspections of the primary seal.
 - ii) A fixed roof with an internal floating type cover equipped with a continuous closure device between the tank wall and the cover edge.
 - iii) A vapor recovery system which collects all VOC vapors and gases discharged from the storage vessel, and a vapor return or disposal system which is designed to process such VOC vapors and gases so as to reduce their emission to the atmosphere by at least ninety-five (95) percent by weight.
 - iv) A system equivalent to those described in paragraphs (i) to (iii) above as determined by the cabinet.
- e) There shall be no visible holes, tears, or other opening in the seal, any seal fabric, shoe, or seal envelope. [401 KAR 59:050, Section 4(1)]
- f) All openings, except stub drains, automatic bleeder vents, rim space vents, and leg sleeves, shall be equipped with covers, lids, or seals such that: [401 KAR 59:050, Section 4(2)(a)-(c)]
 - i) The cover, lid, or seal is in the closed position at all times (i.e., no visible gap) except when in actual use or as described in 401 KAR 59:050, Section 4(3)(f);

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- ii) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports; and
- iv) Rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.

Compliance Demonstration Method:

See the **Specific Monitoring, Recordkeeping and Reporting Requirements** below.

2. Emission Limitations:

See **Section D.3, Source Emission Limitations** for hazardous air pollutant (HAP) and volatile organic compound (VOC) emission limitations.

Compliance Demonstration Method:

See **Section D.3, Source Emission Limitations, *Compliance Demonstration Method***.

3. Testing Requirements:

- a) The permittee shall comply with the following requirements for storage tanks 184, 187, 196 and 197. [40 CFR 113b(a)]
 - i) After installing the control equipment required to meet 40 CFR 60.112b(a)(1) (permanently affixed roof and internal floating roof), the permittee shall:
 - A) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.
 - B) For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Division in the inspection report required in 40 CFR 60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

control equipment will be repaired or the vessel will be emptied as soon as possible.

- C) For vessels equipped with a double-seal system as specified in 40 CFR 60.112b(a)(1)(ii)(B):
 - 1) Visually inspect the vessel as specified in paragraph D) below, at least every 5 years; or
 - 2) Visually inspect the vessel as specified in paragraph B) above.
- D) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs B) and C)2) above and at intervals no greater than 5 years in the case of vessels specified in paragraph C)1) above.
- E) Notify the Division in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs A) and D) above to afford the Division the opportunity to have an observer present. If the inspection required by paragraph D) above is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Division at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Division at least 7 days prior to the refilling.

4. Specific Monitoring Requirements:

See **Specific Recordkeeping Requirements 5** below.

5. Specific Recordkeeping Requirements:

- a) For storage tanks 184, 187, 196 and 197, the permittee shall keep records and furnish reports as required below. The permittee shall keep copies of all reports and records required by this condition for at least 2 years. [40 CFR 60.115b]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- i) After installing control equipment in accordance with 40 CFR 60.112b(a)(1) (fixed roof and internal floating roof), the permittee shall meet the following requirements. [40 CFR 60.115b(a)]
 - A) Furnish the Division with a report that describes the control equipment and certifies that the control equipment meets the specifications of 40 CFR 60.112b(a)(1) and 40 CFR 60.113b(a)(1). This report shall be an attachment to the notification required by 40 CFR 60.7(a)(3).
 - B) Keep a record of each inspection performed as required by 40 CFR 60.113b (a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).
 - C) If any of the conditions described in 40 CFR 60.113b(a)(2) are detected during the annual visual inspection required by 40 CFR 60.113b(a)(2), a report shall be furnished to the Division within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.
 - D) After each inspection required by 40 CFR 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in 40 CFR 60.113b(a)(3)(ii), a report shall be furnished to the Division within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of 40 CFR 60.112b(a)(1) or 40 CFR 60.113b(a)(3) and list each repair made.
- b) The permittee shall keep readily accessible records showing the dimension of each affected storage vessel and an analysis showing the capacity of the storage vessel. These records shall be kept for the life of the storage tank. [40 CFR 60.116b(b)]
- c) The permittee shall maintain records of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period for affected storage tanks which have a design capacity greater than 39,890 gallons (151 m³) storing a liquid with a maximum true vapor pressure greater than or equal to 0.5 psia (3.5 kPa). [40 CFR 60.116b(c)]
- d) The permittee, for each storage vessel either with a design capacity greater than or equal to 39,890 gallons (151 m³) storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia (5.2 kPa) or with a design capacity greater than or equal to 19,813 gallons (75 m³) but less than 39,890 gallons (151 m³) storing a liquid with a maximum true vapor pressure that is normally less than 4.0 psia (27.6 kPa), shall notify the Division within 30 days when the maximum

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40 CFR 60.116b(d)]

- e) The permittee shall maintain a record of the petroleum liquid stored, the period of storage, and the maximum true vapor pressure of that liquid during the respective storage period. [401 KAR 59:050, Section 5(1)]
- f) Available data on the typical Reid vapor pressure and the maximum expected storage temperatures of the stored product may be used to determine the maximum true vapor pressure. [401 KAR 59:050, Section 5(2)]
- g) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than thirteen and eight-tenths (13.8) kPa (two and zero-tenths (2.0) psia) or whose physical properties preclude determination by the recommended method is to be determined from available data and recorded if the estimated true vapor pressure is greater than six and nine-tenths (6.9) kPa (one and zero-tenths (1.0) psia). [401 KAR 59:050, Section 5(3)]
- h) The permittee shall maintain records of petroleum liquid throughput in accordance with **Section D.4** and **Section F.2**.

6. Specific Reporting Requirements:

See Specific Record keeping Requirements 5.a.i. Also, see **Section F.9**

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Facility Storage Tanks III

Emission Point (Tank ID #)	Emission Unit Description	Product Stored (vapor pressure)	Installation Date	Storage Capacity (Gallons)
07 (182)	Vertical Fixed Dome Roof Tank with vapor resilient seal and equipped with vapor recovery unit	Gasoline (8.5 psia)	1969	50,285
07 (191)	Vertical Fixed Dome Roof Tank with vapor resilient seal and equipped with vapor recovery unit	Gasoline (9.0 psia)	1969	66,643
07 (192)	Vertical Fixed Dome Roof Tank with vapor resilient seal and equipped with vapor recovery unit	Gasoline (9.0 psia)	1969	66,222
07 (193)	Vertical Fixed Dome Roof Tank with vapor resilient seal and equipped with vapor recovery unit	Gasoline (9.0 psia)	1969	67,432
07 (194)	Vertical Fixed Dome Roof Tank with vapor resilient seal and equipped with vapor recovery unit	Gasoline (5.8 psia)	1969	66,431

APPLICABLE REGULATIONS:

401 KAR 59:050, *New Storage Vessels for Petroleum Liquids*

1. Operating Limitations:

- a) The permittee shall comply with the facility petroleum liquid throughput limits of **Source Emission Limitations D.3.** [State-only requirement in Permit No. O-84-124, General Condition 6]

Compliance Determination Method:

See **Source Emission Limitations D.3, Compliance Demonstration Method.**

- b) Each storage tank shall be equipped with a permanent submerged fill pipe. [401 KAR 59:050, Section 3(2)]
- c) Each storage tank shall be equipped with one (1) of the following: [401 KAR 59:050, Section 3(3)]
- i) An external floating roof, consisting of a pontoon-type or double-deck-type cover that rests on the surface of the liquid contents and is equipped with a closure device between the tank wall and the roof edge. Except as provided in paragraph C) below, the closure device is to consist of two (2)

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

seals, one (1) above the other. The lower seal is referred to as the primary seal and the upper seal is referred to as the secondary seal. Each seal is to meet the following requirements:

- A) The primary seal is to be either a metallic shoe seal, a liquid-mounted seal, or a vapor-mounted seal.
 - B) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in 401 KAR 59:050, Section 4(3)(c)..
 - C) The owner or operator is exempted from the requirements for secondary seals and the secondary seal gap criteria when performing gap measurements or inspections of the primary seal.
- ii) A fixed roof with an internal floating type cover equipped with a continuous closure device between the tank wall and the cover edge.
 - iii) A vapor recovery system which collects all VOC vapors and gases discharged from the storage vessel, and a vapor return or disposal system which is designed to process such VOC vapors and gases so as to reduce their emission to the atmosphere by at least ninety-five (95) percent by weight.
 - iv) A system equivalent to those described in paragraphs (i) to (iii) above as determined by the cabinet.
- d) There shall be no visible holes, tears, or other opening in the seal, any seal fabric, shoe, or seal envelope. [401 KAR 59:050, Section 4(1)]
 - e) All openings, except stub drains, automatic bleeder vents, rim space vents, and leg sleeves, shall be equipped with covers, lids, or seals such that: [401 KAR 59:050, Section 4(2)(a)-(c)]
 - i) The cover, lid, or seal is in the closed position at all times (i.e., no visible gap) except when in actual use or as described in subsection (3)(f) of this section;
 - ii) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports; and
 - iii) Rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.

Compliance Demonstration Method:

See the **Specific Monitoring, Recordkeeping and Reporting Requirements** below.

2. Emission Limitations:

See **Section D.3, Source Emission Limitations** for hazardous air pollutant (HAP) and volatile organic compound (VOC) emission limitations.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)***Compliance Demonstration Method:***

See Section D.3, Source Emission Limitations, *Compliance Demonstration Method*.

3. Testing Requirements:

Testing shall be conducted at such times as may be required by the Cabinet in accordance with Regulations 401 KAR 52:020, Section 10 and 401 KAR 50:045.

4. Specific Monitoring Requirements:

See **Specific Recordkeeping Requirements 5.** below.

5. Specific Recordkeeping Requirements:

- a) The permittee shall maintain records of petroleum liquid throughput in accordance with **Section D.4** and **Section F.2**.
- b) The permittee shall maintain a record of the petroleum liquid stored, the period of storage, and the maximum true vapor pressure of that liquid during the respective storage period. [401 KAR 59:050, Section 5(1)]
- c) Available data on the typical Reid vapor pressure and the maximum expected storage temperatures of the stored product may be used to determine the maximum true vapor pressure. [401 KAR 59:050, Section 5(2)]
- d) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than thirteen and eight-tenths (13.8) kPa (two and zero-tenths (2.0) psia) or whose physical properties preclude determination by the recommended method is to be determined from available data and recorded if the estimated true vapor pressure is greater than six and nine-tenths (6.9) kPa (one and zero-tenths (1.0) psia). [401 KAR 59:050, Section 5(3)]

6. Specific Reporting Requirements:

See **Section F.9**.

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Facility Storage Tanks IV

Emission Point (Tank ID #)	Emission Unit Description	Product Stored (vapor pressure)	Installation Date	Storage Capacity (Gallons)
10 (160)	Internal Floating Roof Tank with primary seal (Vapor-mounted)	Gasoline RVP 9 (4.31 psia)	1950	128,345
10 (161)	Internal Floating Roof Tank with primary seal (Vapor-mounted)	Gasoline RVP 9 (4.31 psia)	1950	128,345
14 (167)	Vertical Fixed Dome Roof Tank	#2 fuel oil (< 1.0 psia)	1950	269,942.65
14 (168)	Vertical Fixed Dome Roof Tank	#2 fuel oil (< 1.0 psia)	1950	269,942.65
14 (173)	Vertical Fixed Dome Roof Tank	Kerosene (< 1.0 psia)	1975	25,592.40
14 (179a)	Vertical Fixed Dome Roof Tank	#2 fuel oil (< 1.0 psia)	1975	25,592.40
14 (179b)	Vertical Fixed Dome Roof Tank	#2 fuel oil (< 1.0 psia)	1975	25,592.40
14 (179c)	Vertical Fixed Dome Roof Tank	#2 fuel oil (< 1.0 psia)	1975	25,592.40
11 (153)	Vertical Fixed Dome Roof Tank	Slop oil (4.0 psia)	1960	39,127
15 (157)	Vertical Fixed Dome Roof Tank	Used Oil (< 0.1 psia)	1950	34,834
15 (158)	Vertical Fixed Dome Roof Tank	Used Oil (< 0.1 psia)	1950	23,261
16 (180)	Vertical Fixed Dome Roof Tank	Used Oil (< 0.1 psia)	1983	10,000
16 (180a)	Vertical Fixed Dome Roof Tank	Used Oil (< 0.1 psia)	1983	8,754.06
17 (198)	Vertical Fixed Dome Roof Tank	#2 fuel oil (< 1.0 psia)	1982	7,700
17 (199)	Vertical Fixed Dome Roof Tank	#2 fuel oil (< 1.0 psia)	1982	7,700
17 (201)	Vertical Fixed Dome Roof Tank	Used Oil (< 0.1 psia)	1982	9,111
19 (181)	Vertical Fixed Dome Roof Tank with vapor resilient seal and equipped with vapor recovery unit	Ethanol (4.0 psia)	1969	51,088

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**APPLICABLE REGULATIONS:**

None

1. Operating Limitations:

The permittee shall comply with the facility petroleum liquid throughput limits of **Source Emission Limitations D.3.** [State-only requirement in Permit No. O-84-124, General Condition 6]

Compliance Determination Method

See **Source Emission Limitations D.3, Compliance Demonstration Method.**

2. Emission Limitations:

See **Section D.3, Source Emission Limitations** for hazardous air pollutant (HAP) and volatile organic compound (VOC) emission limitations.

Compliance Demonstration Method:

See **Section D.3, Source Emission Limitations, Compliance Demonstration Method.**

3. Testing Requirements:

Testing shall be conducted at such times as may be required by the Cabinet in accordance with Regulations 401 KAR 52:020, Section 10 and 401 KAR 50:045.

4. Specific Monitoring Requirements:

None

5. Specific Recordkeeping Requirements:

a. For each tank the permittee shall maintain a record of the liquid stored, the period of storage, and the maximum true vapor pressure of that liquid during the respective storage period. Such records shall be provided to the Division upon request. [401 KAR 52:020, Section 10]

b. See **Section D.4** and **Section F.2** for further requirements.

6. Specific Reporting Requirements:

See **Section F.9.**

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Emission Point:****06 (06) Tank Truck/Trailer Loading Rack**

Description: Two loading lanes with a total of six bottom loading arms with following maximum throughputs:

Crude Oil	84,315 gallons/yr
Waste Oil	2,346,456 gallons/yr
Diesel	24,653,693 gallons/yr
Gasoline	20,547,844 gallons/yr
No. 6 fuel oil	36,007,985 gallons/yr
Kerosene	2,283,281 gallons/yr
Heavy Gas Oil	4,733,610 gallons/yr

Construction Date: July 1993

Control: John Zink Carbon Adsorption/Absorption Vapor Recovery Unit (VRU)
Model: AA-173-7-6
Manufacturer: John Zink
Description: VRU system consists of dual bed carbon absorption unit on the bottom loading rack that receives the vapors from trailers being loaded with the liquid product. The stack from the bed that is in service has an IR detector which continuously monitors the emissions.
Construction Date: July 1993

APPLICABLE REGULATIONS:

401 KAR 60:005, Sections 2 and 3(1)(bbb) - incorporates by reference *40 CFR Part 60.500 to 60.506 (Subpart XX), "Standards of Performance for Bulk Gasoline Terminals, incorporated by reference"*.

1. Operating Limitations:

- a) The maximum loading rate of gasoline shall not exceed 115,000 gallons per day and 17,940,000 gallons per year. [State-only requirement in Permit No. C-93-126]

Compliance Determination Method:

See Specific Record keeping Requirement 5.f below.

- b) The permittee shall comply with the facility petroleum liquid throughput limits of Source Emission Limitations D.3. [State-only requirement in Permit No. O-84-124, General Condition 6]

Compliance Determination Method:

See Source Emission Limitations D.3, Compliance Demonstration Method.

- c) Pursuant to 40 CFR 60.502, the permittee shall comply with the following requirements:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- 1) The truck loading racks shall be equipped with a vapor collection system designed to collect the total organic compound vapors displaced from gasoline tank trucks during product loading. [40 CFR 60.502(a)]
- 2) The emissions to the atmosphere from the vapor collection system due to the loading of liquid product into gasoline tank trucks are not to exceed 35 milligrams of total organic compounds per liter of gasoline loaded. 40 CFR 60.502(b)]
- 3) The vapor collection system shall be designed to prevent any total organic compounds vapors collected at one loading rack from passing to another loading rack. [40 CFR 60.502(d)]
- 4) Loadings of liquid product into gasoline tank trucks shall be limited to vapor-tight gasoline tank trucks using the following procedures: [40 CFR 60.502(e)]
 - A) The permittee shall obtain vapor tightness documentation (described in 40 CFR 60.505(b)) for each gasoline tank truck which is to be loaded at the facility.
 - B) The permittee shall require the tank identification number to be recorded as each gasoline tank truck is loaded at the affected facility.
 - C) The permittee shall cross-check each tank identification number with the file of tank vapor tightness documentation within 2 weeks after the corresponding tank is loaded, unless either of the following conditions is maintained:
 - i) If less than an average of one gasoline tank truck per month over the last 26 weeks is loaded without vapor tightness documentation then the documentation cross-check shall be performed each quarter; or
 - ii) If less than an average of one gasoline tank truck per month over the last 52 weeks is loaded without vapor tightness documentation then the documentation cross-check shall be performed semiannually.If either the quarterly or semiannual cross-check reveals that these conditions were not maintained, the permittee shall return to biweekly monitoring until such time as these conditions are again met.
 - D) The permittee shall notify the owner or operator of each non-vapor-tight gasoline tank truck loaded at the truck loading rack within one week of the documentation cross-check.
 - E) The permittee shall take steps assuring that the non-vapor-tight gasoline tank truck will not be reloaded at the truck loading rack until vapor tightness documentation for the tank is obtained.
- 5) The permittee shall act to assure that loadings of gasoline tank trucks at the truck loading rack are made only into tanks equipped with vapor collection equipment that is compatible with the terminals vapor collection system. [40 CFR 60.502(f)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- 6) The permittee shall act to assure that the terminal's and the gasoline tank truck's vapor collection systems are connected during each loading of a gasoline tank truck at the truck loading rack. [40 CFR 60.502(g)]
- 7) The vapor collection and liquid loading equipment shall be designed and operated to prevent gauge pressure in the delivery tank from exceeding 4,500 pascals (450 mm of water) during product loading. [40 CFR 60.502(h)]
- 8) No pressure-vacuum vent in the bulk gasoline terminal's vapor collection system shall begin to open at a system pressure less than 4,500 pascals (450 mm of water). [40 CFR 60.502(i)]

Compliance Demonstration Method:

Each month, the vapor collection system, processing system, and loading rack system specified in this section shall be inspected during the loading of gasoline tank trucks for total organic compounds liquid or vapor leaks. Detection methods incorporating sight, sound, and/or smell are acceptable. Each detection of a leak shall be recorded and the source of the leak repaired within 15 calendar days after it is detected. [40 CFR 60.502(j)]

2. Emission Limitations:

See **Section D.3, Source Emission Limitations** for hazardous air pollutant (HAP) and volatile organic compound (VOC) emission limitations.

Compliance Demonstration Method:

See **Section D.3, Source Emission Limitations, *Compliance Demonstration Method*.**

3. Testing Requirements:

The permittee shall perform emissions testing within 180 days following issuance of the final permit in order to demonstrate compliance with **Operating Limitations 1.c)2) and c)7).** Testing procedures for VOC emissions from truck loading of gasoline, vapor collection system operations shall be in accordance with 40 CFR 60.503. [401 KAR 52:020, Section 10 and 401 KAR 50:045]

4. Specific Monitoring Requirements:

Monitoring of the tank trucks shall be performed in accordance with the provisions of 40 CFR 60.502(e), (f) and (g). The permittee shall maintain on-site the capability to monitor the delivery tank pressure during a performance test or an inspection, at the request of the Division. [401 KAR 52:020, Section 10]

5. Specific Record Keeping Requirements:

- a) The tank truck vapor tightness documentation required under **Operating Limitation 1.c).4).A)** shall be kept on file at the terminal in a permanent form available for inspection. [40 CFR 60.505(a)]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- b) The documentation file for each gasoline tank truck shall be updated at least once per year to reflect current test results as determined by Method 27. [40 CFR 60.505(b)]
 - c) A record of each monthly leak inspection required by **Operating Limitation 1.c) – Compliance Demonstration Method** shall be kept on file at the terminal for at least 2 years. Inspection records shall include, as a minimum, the following information: [40 CFR 60.505(c)]
 - 1) Date of inspection.
 - 2) Results of the inspection.
 - 3) Leak determination method employed.
 - 4) Corrective action taken, including the date the leak was repaired and reasons for any repair interval in excess of 15 days.
 - 5) Inspector name and signature.
 - d) The permittee shall keep documentation of all notifications required under **Operating Limitation 1.c).4.D)** on file at the terminal for at least 2 years. [40 CFR 60.505(d)]
 - e) The permittee shall keep records of all replacements or additions of components performed on an existing vapor processing system for at least 3 years. [40 CFR 60.505(f)]
 - f) The permittee shall maintain records of the amount of gasoline loaded (gallons) on a monthly and consecutive twelve (12) month basis in accordance with **Operating Limitations 1.a)** and **Section F.2.**
 - g) The permittee shall maintain records of petroleum liquid throughput in accordance with **Section D.4** and **Section F.2.**
6. **Specific Reporting Requirements:**
See **Section F.9.**
7. **Specific Control Equipment Operating Conditions:**
None
8. **Alternate Operating Scenarios:**
None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Facility Components:

Emission Point	Unit ID/Operation	Component (Count)
0A	(A1) Tank 152	Flanges (19) Valves (8)
	(A3) Crude Unloading Rack	Flanges (174) Valves (284) Pump Seals (20)
	(A4) Waste Unloading Rack	Flanges (27) Valves (69) Pump Seals (2)
	(A5) 87 Octane Line	Flanges (54)
	(A6) New Diesel Fugitives	Flanges (212)
05	Others	Flanges (569) Valves (820) Pump Seals (16) Connectors (283) Compressor Seals (10) Relief Valves (37) Open ended/ Drains (14)

APPLICABLE REGULATIONS:

401 KAR 60:005, Sections 2 and 3(1)(fff) incorporates by reference *40 CFR Part 60.590 to 60.593 (Subpart GGG), "Standards of Performance for Volatile for Equipment Leaks of VOC in Petroleum Refineries"*.

401 KAR 63:010, *Fugitive Emissions*.

401 KAR 63:020, *Potentially hazardous matter or toxic substances*.

1. Operating Limitations:

a) Pursuant to 40 CFR 60.592(a), the permittee shall comply with the requirements of 40 CFR 60.482-1 to 60.482-10 (Subpart VV) as specified below:

i) Pursuant to 40 CFR 60.482-2 (*Standards: Pumps in Light Liquid Service*), the permittee shall comply with the following requirements:

A) Each pump in light liquid service shall:

1) be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485(b), except as provided in 40 CFR 60.482-1(c) and paragraphs D), E), and F) below; and

2) be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

B) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. If there are indications of liquids dripping from the pump seal, a leak is detected.

C) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

60.482-9. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

- D) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (A) above, provided the following requirements are met:
- 1) Each dual mechanical seal system is:
 - aa) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or
 - bb) Equipment with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482-10; or
 - cc) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.
 - 2) The barrier fluid system is in heavy liquid service or is not in VOC service.
 - 3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.
 - 4) Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.
 - 5) The following requirements are met:
 - aa) Each sensor as described in paragraph (3) above is checked daily or is equipped with an audible alarm;
 - bb) The permittee determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.
 - 6) If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in paragraph D)5)(bb) above, a leak is detected. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
- E) Any pump that is designated, as described in 40 CFR 60.486(e)(1) and (2), for no detectable emission, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs A), C), and D) above if the pump:
- 1) Has no externally actuated shaft penetrating the pump housing,
 - 2) Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in 40 CFR 60.485(c), and
 - 3) Is tested for compliance with paragraph E)2) above initially upon designation, annually, and at other times requested by the Division.
- F) If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

system or to a control device that complies with the requirements of 40 CFR 60.182-10, it is exempt from paragraphs A) through E) above.

- G) Any pump that is designated, as described in 40 CFR 60.486(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of paragraphs A) and D)4) through 6) above if:
 - 1) The permittee demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph A) above; and
 - 2) The permittee has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph C) above if a leak is detected.
 - H) Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs A)2) and D)4) above, and the daily requirements of paragraph D)5) above, provided that each pump is visually inspected as often as practicable and at least monthly.
- ii) Pursuant to 40 CFR 60.482-3 (*Standards: Compressors*), the permittee shall comply with the following requirements:
- A) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in 40 CFR 60.482-1(c) and paragraphs H) and I) below.
 - B) Each compressor seal system as required in paragraph A) above shall be:
 - 1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or
 - 2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482-10; or
 - 3) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.
 - C) The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.
 - D) Each barrier fluid system as described in paragraph A) above shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.
 - E) Each sensor as required in paragraph D) above shall be checked daily or shall be equipped with an audible alarm. The permittee shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.
 - F) If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under paragraph E) above, a leak is detected.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- G) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
 - H) A compressor is exempt from the requirements of paragraphs A) and B) above, if it is equipped with a closed vent system to capture and transport leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of 40 CFR 60.482-10, except as provided in paragraph below.
 - I) Any compressor that is designated, as described in 40 CFR 60.486(e)(1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs A) through H) above if the compressor:
 - 1) Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the methods specified in 40 CFR 60.485(c); and
 - 2) Is tested for compliance with paragraph I)1) above initially upon designation, annually, and at other times requested by the Division.
 - J) Any existing reciprocating compressor in a process unit which becomes an affected facility under 40 CFR 60.14 and 40 CFR 60.15 is exempt from 40 CFR 60.482(a), (b), (c), (d), (e), and (h), provided the permittee demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of paragraphs A) through E) and H) above.
- iii) Pursuant to 40 CFR 60.482-4 (*Standards: Pressure Relief Devices in Gas/Vapor Service*), the permittee shall comply with the following requirements:
- A) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in 40 CFR 60.485(c).
 - B) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in 40 CFR 60.482-9. No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in 40 CFR 60.485(c).
 - C) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in 40 CFR 60.482-10 is exempted from the requirements of paragraphs A) and B) above.
 - D) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs A) and

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- B) above, provided after each pressure release, a new rupture disk is installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 60.482-9.
- iv) Pursuant to 40 CFR 60.482-5 (*Standards: Sampling Connection Systems*), the permittee shall comply with the following requirements:
- A) Each sampling connection system shall be equipped with a closed-purged, closed-loop, or closed-vent system, except as provided in 40 CFR 60.482-1(c). Gases displaced during filling of the sample container are not required to be collected or captured.
 - B) Each closed-purge, closed-loop, or closed-vent system as required in paragraph A above, shall comply with the following requirements:
 - 1) Return the purged process fluid directly to the process line; or
 - 2) Collect and recycle the purged process fluid to a process; or
 - 3) Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of 40 CFR 60.482-10; or
 - 4) Collect, store, and transport the purged process fluid to any of the following systems or facilities:
 - aa) A waste management unit as defined in 40 CFR 63.111, if the waste management unit is subject to, and operated in compliance with the provisions of 40 CFR part 63, subpart G, applicable to Group 1 wastewater streams;
 - bb) A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266; or
 - cc) A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261.
 - C) In situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs A) and B).
- v) Pursuant to 40 CFR 60.482-6 (*Standards: Open-Ended Valves or Lines*), the permittee shall comply with the following requirements:
- A) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 60.482-1(c). The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.
 - B) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.
 - C) When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph A) above, at all other times.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- D) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs A), B), and C) above.
 - E) Open-ended valves or lines containing materials which would auto catalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs A) through C) above, are exempt from the requirements of paragraphs A) through C) above.
- vi) Pursuant to 40 CFR 60.482-7 (*Standards: Valves in Gas/Vapor Service and in Light Liquid Service*), the permittee shall comply with the following requirements:
- A) Each valve shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485(b) and shall comply with paragraphs B) through E) below, except as provided in paragraphs F), G), and H) below, 40 CFR 60.483-1, 2, and 40 CFR 60.482-1(c).
 - B) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
 - C) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.
 - D) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 60.482-9. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
 - E) First attempts at repair include, but are not limited to, the following best practices where practicable:
 - 1) Tightening of bonnet bolts;
 - 2) Replacement of bonnet bolts;
 - 3) Tightening of packing gland nuts;
 - 4) Injection of lubricant into lubricated packing.
 - F) Any valve that is designated, as described in 40 CFR 60.486(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph A) above, if the valve:
 - 1) Has no external actuating mechanism in contact with the process fluid,
 - 2) Is operated with emissions less than 500 ppm above background as determined by the method specified in 40 CFR 60.485(c), and
 - 3) Is tested for compliance with paragraph F)2) above, initially upon designation, annually, and at other times requested by the Division.
 - G) Any valve that is designated, as described in 40 CFR 60.486(F)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph(A) above, if:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- 1) The permittee demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph A) above, and
 - 2) The permittee of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.
- H) Any valve that is designated, as described in 40 CFR 60.486(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph(A) above, if:
- 1) The permittee demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.
 - 2) The process unit within which the valve is located either becomes an affected facility through 40 CFR 60.14 or 40 CFR 60.15 or the permittee designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and
 - 3) The permittee follows a written plan that requires monitoring of the valve at least once per calendar year.
- vii) Pursuant to 40 CFR 60.482-8 (Standards: Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Connectors), the permittee shall comply with the following requirements:
- A) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors, the permittee shall follow either one of the following procedures:
 - 1) The permittee shall monitor the equipment within 5 days by the method specified in 40 CFR 60.485(b) and shall comply with the requirements of paragraphs B) through D) below.
 - 2) The permittee shall eliminate the visual, audible, olfactory, or other indication of a potential leak.
 - B) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
 - C) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Condition E.4.9. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
 - D) First attempts at repair include, but are not limited to, the best practices described under 40 CFR 60.482-7(e), as vi)E) above.
- viii) Pursuant to 40 CFR 60.482-9 (Standards: Delay of Repair), the permittee shall comply with the following requirements:
- A) Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.
- B) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.
 - C) Delay of repair for valves will be allowed if:
 - 1) The permittee demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and
 - 2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 60.482-10.
 - D) Delay of repair for pumps will be allowed if:
 - 1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and
 - 2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.
 - E) Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.
- ix) Pursuant to 40 CFR 60.482-10 (*Standards: Closed Vent Systems and Control Devices*), the permittee shall comply with the following requirements:
- A) For closed vent systems and control devices used to comply with the provisions of 40 CFR 60, Subpart VV, the permittee shall comply with the provisions of this Condition.
 - B) Vapor recovery systems (for example, condensers and absorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, whichever is less stringent.
 - C) Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816°C.
 - D) Flares used to comply with this subpart shall comply with the requirements of 40 CFR 60.18.
 - E) For control devices used to comply with the provisions of 40 CFR 60, Subpart VV, the permittee shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.
 - F) Except as provided in paragraphs I) through K) below, each closed vent system shall be inspected according to the procedures and schedule specified below:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- 1) If the vapor collection system or closed vent system is constructed of hard-piping, the permittee shall comply with the requirements specified in paragraphs aa) and bb) below:
 - aa) Conduct an initial inspection according to the procedures in 40 CFR 60.485(b); and
 - bb) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.
- 2) If the vapor collection system or closed vent system is constructed of ductwork, the permittee shall:
 - aa) Conduct an initial inspection according to the procedures in 40 CFR 60.485(b); and
 - bb) Conduct annual inspections according to the procedures in 40 CFR 60.485(b).
- G) Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practicable except as provided in paragraph H) below.
 - 1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.
 - 2) Repair shall be completed no later than 15 calendar days after the leak is detected.
- H) Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the permittee determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.
- I) If a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection requirements of paragraphs F)1)aa) and F)2) above.
- J) Any parts of the closed vent system that are designated, as described in paragraph L)2) below, as unsafe to inspect are exempt from the inspection requirements of paragraphs F)1)aa) and F)2) above if they comply with the following requirements:
 - 1) The permittee determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraphs F)1)aa) or F)2) above; and
 - 2) The permittee has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.
- K) Any parts of the closed vent system that are designated, as described in paragraph L)2) below, as difficult to inspect are exempt from the inspection requirements of paragraphs F)1)aa) and F)2) above if they comply with the requirements specified below:
 - 1) The permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- 2) The Process unit within which the closed vent system is located becomes an affected facility through 40 CFR 60.14 and 60.15, or the permittee designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and
 - 3) The permittee has a written plan that requires inspection of the equipment at least once every 5 years. A closed vent system is exempt from inspection if it is operated under a vacuum.
 - L) The permittee shall record the information specified below:
 - 1) Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.
 - 2) Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.
 - 3) For each inspection during which a leak is detected, a record of the information specified in 40 CFR 60.486(c).
 - 4) For each inspection conducted in accordance with 40 CFR 60.485(b) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.
 - 5) For each visual inspection conducted in accordance with paragraph F)1)bb) above during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.
 - M) Closed vent systems and control devices used to comply with provisions of 40 CFR 60, Subpart VV shall be operated at all times when emissions may be vented to them.
- b) Pursuant to 401 KAR 63:020, no owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants.

Compliance Demonstration Method:

- a) See the Specific **Monitoring, Recordkeeping and Reporting Requirements** below.
- b) Demonstration of compliance with paragraph a) above, shall also serve as the demonstration of compliance with the air toxic limitation in **Operating Limitations 1.b** above.

2. Emission Limitations:

See **Section D.3, Source Emission Limitations** for hazardous air pollutant (HAP) and volatile organic compound (VOC) emission limitations.

Compliance Demonstration Method:

See **Section D.3, Source Emission Limitations, *Compliance Demonstration Method*.**

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**3. Testing Requirements:**

Testing shall be conducted at such times as may be required by the Cabinet in accordance with Regulations 401 KAR 52:020, Section 10 and 401 KAR 50:045.

4. Specific Monitoring Requirements:

- a) The permittee shall monitor the facility components on a monthly basis in accordance with the procedures of 40 CFR 60.485 to demonstrate compliance with **Operating Limitations 1.a.** The permittee shall comply as follows: [401 KAR 52:020, Section 10]
 - i) The permittee shall determine compliance with the standards in 40 CFR 60.482, 60.483, and 60.484 as follows:
 - A) Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21. The following calibration gases shall be used:
 - 1) Zero air (less than 10 ppm of hydrocarbon in air); and
 - 2) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane.
 - ii) The permittee shall determine compliance with the no detectable emission standards in 40 CFR 60.482-2(e), 60.482-3(i), 60.482-4, 60.482-7(f), and 60.482-10(e) as follows:
 - A) The requirements of paragraph i)A) above shall apply.
 - B) Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.
 - iii) The permittee shall test each piece of equipment unless it is demonstrated that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used:
 - A) Procedures that conform to the general methods in ASTM E260-73, 91, or 96, E168-67, 77, or 92, E169-63, 77, or 93 (incorporated by reference -- see 40 CFR 60.17) shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment.
 - B) Organic compounds that are considered by the Division to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid.
 - C) Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the Division disagrees with the judgment, paragraphs A) and B) above shall be used to resolve the disagreement.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- iv) The permittee shall demonstrate that an equipment is in light liquid service by showing that all the following conditions apply:
 - A) The vapor pressure of one or more of the components is greater than 0.3 kPa at 20 °C (1.2 in. H₂O at 68 °F). Standard reference texts or ASTM D2879-83, 96, or 97 (incorporated by reference -- see 40 CFR 60.17) shall be used to determine the vapor pressures.
 - B) The total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. H₂O at 68 °F) is equal to or greater than 20 percent by weight.
 - C) The fluid is a liquid at operating conditions.
 - v) Samples used in conjunction with paragraphs (iii) and (iv) above, shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.
- b) Also see **Section F.2**.

5. Specific Recordkeeping Requirements:

- a) Pursuant to 40 CFR 60.486, the permittee shall comply with the following requirements:
 - i) When each leak is detected as specified in 40 CFR 60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following requirements apply:
 - A) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.
 - B) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR 60.482-7(c) and no leak has been detected during those 2 months.
 - C) The identification on equipment except on a valve, may be removed after it has been repaired.
 - ii) When each leak is detected as specified in 40 CFR 60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:
 - A) The instrument and operator identification numbers and the equipment identification number.
 - B) The date the leak was detected and the dates of each attempt to repair the leak.
 - C) Repair methods applied in each attempt to repair the leak.
 - D) "Above 10,000" if the maximum instrument reading measured by the methods specified in 40 CFR 60.485(a) after each repair attempt is equal to or greater than 10,000 ppm.
 - E) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
 - F) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- G) The expected date of successful repair of the leak if a leak is not repaired within 15 days.
 - H) Dates of process unit shutdowns that occur while the equipment is unrepaired.
 - I) The date of successful repair of the leak.
- iii) The following information pertaining to the design requirements for closed vent systems and control devices described in 40 CFR 60.482-10 shall be recorded and kept in a readily accessible location:
- A) Detailed schematics, design specifications, and piping and instrumentation diagrams.
 - B) The dates and descriptions of any changes in the design specifications.
 - C) A description of the parameter or parameters monitored, as required in 40 CFR 60.482-10(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.
 - D) Periods when the closed vent systems and control devices required in 40 CFR 60.482-2, 60.482-3, 60.482-4, and 60.482-5 are not operated as designed, including periods when a flare pilot light does not have a flame.
 - E) Dates of startups and shutdowns of the closed vent systems and control devices required in 40 CFR 60.482-2, 60.482-3, 60.482-4, and 60.482-5.
- iv) The following information pertaining to all equipment subject to the requirements in 40 CFR 60.482-1 to 60.482-10 shall be recorded in a log that is kept in a readily accessible location:
- A) A list of identification numbers for equipment subject to the requirements of this subpart.
 - B) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40 CFR 60.482-2(e), 60.482-3(i) and 60.482-7(f).
 - C) The designation of equipment as subject to the requirements of 40 CFR 60.482-2(e), 40 CFR 60.482-3(i), or 40 CFR 60.482-7(f) shall be signed by the permittee.
 - D) A list of equipment identification numbers for pressure relief devices required to comply with 40 CFR 60.482-4.
 - E) The dates of each compliance test as required in 40 CFR 60.482-2(e), 60.482-3(i), 60.482-4, and 60.482-7(f).
 - F) The background level measured during each compliance test.
 - G) The maximum instrument reading measured at the equipment during each compliance test.
 - H) A list of identification numbers for equipment in vacuum service.
- v) The following information pertaining to all valves subject to the requirements of 40 CFR 60.482-7(g) and (h) and to all pumps subject to the requirements of 40 CFR 60.482-2(g) shall be recorded in a log that is kept in a readily accessible location:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- A) A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump.
 - B) A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.
- vi) The following information shall be recorded for valves complying with 40 CFR 60.483-2:
- A) A schedule of monitoring.
 - B) The percent of valves found leaking during each monitoring period.
- vii) The following information shall be recorded in a log that is kept in a readily accessible location:
- A) Design criterion required in 40 CFR 60.482-2(d)(5) and 60.482-3(e)(2) and explanation of the design criterion; and
 - B) Any changes to this criterion and the reasons for the changes.
- viii) The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in 40 CFR 60.480(d):
- A) An analysis demonstrating the design capacity of the affected facility,
 - B) A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and
 - C) An analysis demonstrating that equipment is not in VOC service.
- ix) Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.

6. Specific Reporting Requirements:

- a) Pursuant to 40 CFR 60.487, the permittee shall comply with the following requirements:
 - i) The permittee shall submit semiannual reports to the Division.
 - ii) All semiannual reports to the Division shall include the following information, summarized from the information in **Specific Recordkeeping Requirements 5.a:**
 - A) Process unit identification.
 - B) For each month during the semiannual reporting period,
 - 1) Number of valves for which leaks were detected as described in 40 CFR 60.482(7)(b) or 60.483-2,
 - 2) Number of valves for which leaks were not repaired as required in 40 CFR 60.482-7(d)(1),
 - 3) Number of pumps for which leaks were detected as described in 40 CFR 60.482-2(b) and (d)(6)(i),

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- 4) Number of pumps for which leaks were not repaired as required in 40 CFR 60.482-2(c)(1) and (d)(6)(ii),
 - 5) Number of compressors for which leaks were detected as described in 40 CFR 60.482-3(f),
 - 6) Number of compressors for which leaks were not repaired as required in 40 CFR 60.482-3(g)(1), and
 - 7) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.
- C) Dates of process unit shutdowns which occurred within the semiannual reporting period.
- E) Revisions to items reported in the initial semiannual report if changes have occurred since the initial report or subsequent revisions to the initial report.

iii) The permittee electing to comply with the provisions of 40 CFR 60.483-1 or 60.483-2 shall notify the Division of the alternative standard selected 90 days before implementing either of the provisions.

iv) The permittee shall report the results of all performance tests in accordance with 40 CFR 60.8 of the General Provisions.

b) Also see **Section F.9.**

7. **Specific Control Equipment Operating Conditions:**
None

8. **Alternate Operating Scenarios:**
None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**55 (-) Sulfur Removal Unit****Description:** Sulfa Treat Columns (backup sulfur removal system)

One (1) Sulfur Removal Unit, consisting of a Sodium Hydro Sulfide (NaHS) Unit, identified as EP55 and installed in 1997, with a maximum processing capacity of 250 cubic feet per minute high sulfur fuel gas (240 ppm H₂S) and 0.2 gallons per minute sodium hydroxide (25%) solution (aqueous), and producing low sulfur plant fuel gas (less than 0.1 gr/dcf) and sodium hydro sulfide
Construction Date: 1997

One (1) vertical fixed dome roof tank, identified as tank T200, with a capacity of 9,219 gallons, storing sodium hydro sulfide
Construction Date: 1982

Control Equipment: None

NON-APPLICABLE REGULATIONS:

401 KAR 60:005, Sections 2 and 3(1)(n) - incorporates by reference *40 CFR Part 60.100 to 60.109 (Subpart J)*, "Standards of Performance for Petroleum Refineries" – does not apply to the sulfur removal unit because this is not a Claus sulfur recovery plant.

1. Operating Limitations:

The permittee shall maintain one fresh Sulfatreat column. Columns shall be replenished within seven (7) days of change out [State-only requirement in Permit No. S-95-208].

Compliance Demonstration Method:

See **Specific Monitoring Requirements 4. and Recordkeeping Requirements 5.** below.

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

- a) The permittee shall monitor and record the dates of sulfatreat column replenishment. [401 KAR 52:020, Section 10]
- b) The permittee shall monitor and record the dates of sulfa treat column usage during instances when the Sulfra Removal Unit is not operated, and the reason the Sulfa Removal Unit is non-operational. [401 KAR 52:020, Section 10]
- c) The permittee shall perform a visual inspection of the Sulfur Removal Unit in operation at least once per month to insure the equipment appears to be operating properly and that the integrity of the system is not compromised by damage,

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

malfunction or deterioration. Immediate repairs shall be made to correct obvious failures or deficiencies. [401 KAR 52:020, Section 10]

5. Specific Recordkeeping Requirements:

- a) The permittee shall keep records required by Specific Monitoring Requirements 4.a and 4.b. and supply such to the Division upon request
- b) The permittee shall keep records and supply such to the Division upon request of all equipment inspections and any maintenance, inspection, calibration and/or replacement of such equipment required by Specific Monitoring Requirements 4.c.
- c) See **Section F.2.**

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

<u>Description</u>	<u>Generally Applicable Regulation</u>
1. Operators Testing Shack – Laboratory Facility	None
2. Steam Pad Emissions	None
3. Plant Maintenance – 3 Shutdowns per year	None
4. Dust from roads	[401 KAR 63:010]
5. General painting of plant structures and equipment	None
6. Occasional machining in fabrication shop	[401 KAR 59:010]
7. One (1) No. 2 fuel oil fired space heater in fabrication shop rated at 0.125 mmBtu/hr	None
8. Electrical backup generator	None
9. Truck maintenance runup	None
10. Gas powered plant equipment (i.e., welders, small motors, etc.)	[401 KAR 59:010]
11. Tank 97 diesel treatment power service, Premium Diesel Kleen® Performance Improver 3341-04 (vapor pressure = 0.2 to 0.8 mm Hg @ 20°C per manufacturer)	[401 KAR 63:010]
12. Tank 96 Multifunction Gasoline Treatment DMA-582 (vapor pressure = high viscous solution)	[401 KAR 63:010]
13. EP A2 - Two (2) cooling towers	[Permit No. S-96-183] [401 KAR 59:010]
14. EP20 - one (1) 25,892.4 gallon vertical fixed roof tank, constructed in 1969, storing Sodium Hydroxide	None
15. Oil/water separator consisting of 1600 liter open rectangular pit and constructed in 1940.	None
16. EP 18 – Five wastewater storage tanks	None

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.
2. Volatile organic compound (VOC), sulfur dioxide (SO₂), particulate matter and hydrogen sulfide (H₂S) emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.
3. **Source Operating Limitations:**
 - a) Pursuant to State-only requirements in Operation Permit No. O-84-124 (Revised), issued on February 13, 1987, the total annual processing/production rates shall not exceed the following limitations on a twelve (12) consecutive month basis:
 - (1) Crude Oil: 2,242,800 barrels per twelve (12) consecutive month period;
 - (2) Gasoline: 427,200 barrels per twelve (12) consecutive month period;
 - (3) Naphtha: 358,848 barrels per twelve (12) consecutive month period; and
 - (4) Kerosene: 142,400 barrels per year twelve (12) consecutive month period.

Compliance Demonstration Method:

See **Source Recordkeeping Requirements 4.a.**

- b) To preclude the applicability of 40 CFR Part 63.640 (Subpart CC), "National Emission Standards for Hazardous Emissions from Petroleum Refineries", total annual source-wide emissions shall not exceed the following specific limitations on a twelve (12) consecutive month basis:
 - (1) Volatile organic compound (VOC) emissions shall not equal or exceed 90 tons per twelve (12) consecutive month period;
 - (2) Emissions of any single hazardous air pollutants (HAP) shall not exceed 9 tons per twelve (12) consecutive month period; and
 - (3) Emissions of combined hazardous air pollutant (HAPs) shall not exceed 22.5 tons per twelve (12) consecutive month period.

Compliance Demonstration Method:

Calculate annual source-wide emissions from emission units including combustion units, flare, storage tanks, loading rack and pipeline equipment fugitives for each month of the previous 12-month period (i.e.: for the month January, the compliance demonstration shall be completed in February and shall include all data from February of the previous year to the last day of January).

All emission calculations shall be based on standard USEPA methodology (i.e.: the most current TANKS program for tanks, AP-42 emissions factors for refinery fuel combustion units and loading operation, current USEPA Protocol for Equipment Leak Estimates, appropriately summing the product of the weight percent of each HAP in the organic

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

material emissions for each organic material emissions attributed to the storage and handling of that liquid, etc.).

Fugitive VOC and HAP emissions from equipment leaks shall be calculated based on the "Preferred and alternative methods for estimating fugitive emissions from equipment leaks", Final Report, Volume II: Chapter 4, Table 4.4-4 using the screening value (SV) recorded for each type of component under the source's Leak Detection and Repair (LDAR) program. The SV value for each type of component shall be monitored and recorded on monthly basis.

4. **Source Recordkeeping Requirements:**

- a) The permittee shall record and maintain the processing/production rate of each material in **Source Operating Limitations 3**, on a monthly basis. The permittee shall maintain the records onsite such that they are readily accessible. These records shall indicate the throughput volume of each type of product per storage tank (gallons per month) and the permittee shall provide these records to Division personnel upon request.
- b) Actual VOC and HAP emissions from each emission point shall be determined and recorded on a monthly basis in accordance with **Source Emission Limitations 3, Compliance Demonstration Method**. The permittee shall maintain records onsite such that they are readily accessible. These records shall indicate the production rate of each type of product and the permittee shall provide these records to Division personnel upon request.
- c) The permittee shall monitor and record the SV value of each type of component associated with equipment leaks under the LDAR program.

5. **Source Reporting Requirements:**

The permittee shall report to the Division in accordance with **Section F** the amount of total VOC and HAP emissions from the source.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

1. Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b (IV)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
 - a. Date, place as defined in this permit, and time of sampling or measurements;
 - b. Analyses performance dates;
 - c. Company or entity that performed analyses;
 - d. Analytical techniques or methods used;
 - e. Analyses results; and
 - f. Operating conditions during time of sampling or measurement.
2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b(IV) 2 and 1a(8) of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
 - a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
 - b. To access and copy any records required by the permit;
 - c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.
4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
5. Summary reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Section 1b (V)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. Data from the continuous emission and opacity monitors shall be reported to the Technical Services Branch in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. All deviations from permit requirements shall be clearly identified in the reports.
7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
 - a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7. above) to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report required by Section F.6 [Section 1b (V) 3, 4. of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
 - a. Identification of the term or condition;
 - b. Compliance status of each term or condition of the permit;
 - c. Whether compliance was continuous or intermittent;
 - d. The method used for determining the compliance status for the source, currently and over the reporting period.
 - e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
 - f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications should be mailed to the following addresses:

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

Division for Air Quality
London Regional Office
875 S. Main Street
London, KY 40741

U.S. EPA Region 4
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St.
Atlanta, GA 30303-8960

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee.
11. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

SECTION G - GENERAL PROVISIONS(a) General Compliance Requirements

1. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 and of the Clean Air Act and is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a, 3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020 Section 26].
2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a, 6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
3. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
 - a. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
 - b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
 - c. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;

Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

4. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Section 1a, 7,8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

6. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a, 14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
7. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a, 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
8. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens of the United States [Section 1a, 15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
9. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a, 10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3)(b)].
11. This permit does not convey property rights or exclusive privileges [Section 1a, 9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Environmental and Public Protection or any other federal, state, or local agency.
13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3)(d)].
14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3)(a)].
15. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

SECTION G - GENERAL PROVISIONS (CONTINUED)

16. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of issuance. Compliance with the conditions of a permit shall be considered compliance with:
 - a. Applicable requirements that are included and specifically identified in the permit and
 - b. Non-applicable requirements expressly identified in this permit.
17. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least Thirty (30) days prior to the test.

(b) Permit Expiration and Reapplication Requirements

1. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].
2. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020 Section 8(2)].

(c) Permit Revisions

1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).
2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

SECTION G - GENERAL PROVISIONS (CONTINUED)(d) Construction, Start-Up, and Initial Compliance Demonstration Requirements

None

(e) Acid Rain Program Requirements

If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

(f) Emergency Provisions

1. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
 - a. An emergency occurred and the permittee can identify the cause of the emergency;
 - b. The permitted facility was at the time being properly operated;
 - c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - d. Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
 - e. This requirement does not relieve the source of other local, state or federal notification requirements.
2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].
3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

g) Risk Management Provisions

1. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

RMP Reporting Center
P.O. Box 1515
Lanham-Seabrook, MD 20703-1515.

SECTION G - GENERAL PROVISIONS (CONTINUED)

2. If requested, submit additional relevant information to the Division or the U.S. EPA.

(h) Ozone depleting substances

1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
 - a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
 - c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
 - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166.
 - e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
 - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION H - ALTERNATE OPERATING SCENARIOS

None

SECTION I - COMPLIANCE SCHEDULE

None